

Appl. No. : 10/624, 728  
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### AMENDMENTS TO THE CLAIMS

1. (Currently amended) A photoresist ashing system comprising two processing chambers configured for alternate operation, ~~and a single pump in fluid communication with the two chambers, and a throttle valve simultaneously downstream of both chambers and upstream of the pump,~~ the pump being configured to perform both pumpdown and process pumping of the two chambers and the throttle valve configured to regulate the pressure in both of the chambers.

2. (Canceled)

3. (Original) The system of Claim 1, wherein the single pump is a dry pump.

4. (Currently amended) The system of Claim 1, ~~wherein the system further comprises~~ comprising only one isolation valve between the pump and a first one of the chambers.

5. (Currently amended) The system of Claim 4, ~~wherein the system further comprises~~ comprising only one isolation valve between the pump and a second one of the chambers.

6. (Currently amended) The ~~apparatus-system~~ of Claim 1, wherein the chambers are adjacent to each other.

7. (Currently amended) The ~~apparatus-system~~ of Claim 1, wherein each chamber comprises a remote plasma applicator configured to be powered by a common power source switchable between the ~~first chamber and the second chamber~~ two chambers.

8. (Currently amended) The ~~apparatus-system~~ of Claim 7, wherein the power ~~supply~~ source is a microwave power source.

9. (Currently amended) The ~~apparatus-system~~ of Claim 7, wherein the power ~~supply~~ source is a common radio frequency power source synchronously multiplexed between the ~~pair of two processing chambers.~~

10. (Currently amended) The ~~apparatus-system~~ of Claim 1, wherein the processing chambers are each configured to receive a single silicon wafer at a time, and the processing chambers are each comprise a downstream of a plasma reactor-applicator.

11. (Currently amended) The ~~apparatus-system~~ of Claim 1, wherein the processing chambers are each configured to receive a single silicon wafer at a time, and the processing chambers each comprise an ~~in-chamber~~ in situ plasma reactor.

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12. (Currently amended) A dual chamber processing system for continuously processing a plurality of workpieces comprising:

a common power source switchable between a first plasma applicator of a first chamber and a second plasma applicator of a second chamber,

the first chamber for processing a second workpiece in a vacuum to completion therein when the power source is applied thereto and switched ON,

a robot ~~for removing~~ configured to remove at substantially atmospheric pressure a first workpiece from the second chamber after processing the first workpiece, the robot configured to and reloading-reload the second chamber with a third workpiece to be processed while the second workpiece is being processed in the first chamber, the robot configured to remove at substantially atmospheric pressure the second workpiece from the first chamber after processing the first workpiece, the robot configured to reload the first chamber with a fourth workpiece to be processed while the third workpiece is being processed in the second chamber,

the second chamber for processing the third workpiece in a vacuum to completion therein when the power source is applied to the second plasma applicator and switched ON,

~~the robot for removing at substantially atmospheric pressure the second workpiece from the first chamber after processing and reloading the first chamber with a fourth workpiece to be processed while the third workpiece is being processed in the second chamber, and~~

exactly one pump adapted to be in fluid communication with the first and second chambers, the pump being configured to perform both process pumping and pump-down pumping of both chambers; and

a computer configured to repeatedly synchronously and alternately control the power source application, the robot movement, the chamber processing, and the pump, the computer configured to control the pump and the robot to effect pump-down and subsequent process pumping of one of the chambers during simultaneous venting, workpiece removal and workpiece reloading of the other of the chambers, such that said pump-down pumping of one of the chambers and said venting of the other of the

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chambers begin at substantially the same time, and the computer being configured to open the pump to fluid communication with only one of the chambers at a time.

13-17. (Canceled)

18. (New) The system of Claim 12, wherein the single pump is a dry pump.

19. (New) The system of Claim 12, wherein the system further comprises only one isolation valve between the pump and the first chamber.

20. (New) The system of Claim 19, wherein the system further comprises only one isolation valve between the pump and the second chamber.

21. (New) The system of Claim 12, wherein the first chamber and the second chamber are adjacent to each other.

22. (New) The system of Claim 12, wherein the power source is a microwave power source.

23. (New) The system of Claim 12, wherein the power source is a common radio frequency power source synchronously multiplexed between the two processing chambers.

24. (New) The system of Claim 12, wherein the chambers are each configured to receive a single silicon wafer at a time, and the chambers are each downstream of a plasma reactor.

25. (New) The system of Claim 12, wherein the chambers are each configured to receive a single silicon wafer at a time, and the chambers each comprise an in situ plasma reactor.